

Wireless Turbidity Sensor

Wireless Sensor Network Based on LoRa Technology



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Introduction

R718PA10 is a wireless communication device for detecting the turbidity.

R718PA10 can detect the turbidity value and temperature of the solution. The body and the turbidity sensor are connected through the RS485 interface, and the detected data is transmitted to other devices through the wireless network for display. It adopts the wireless communication method that conforms to the LoRa™ protocol standard.

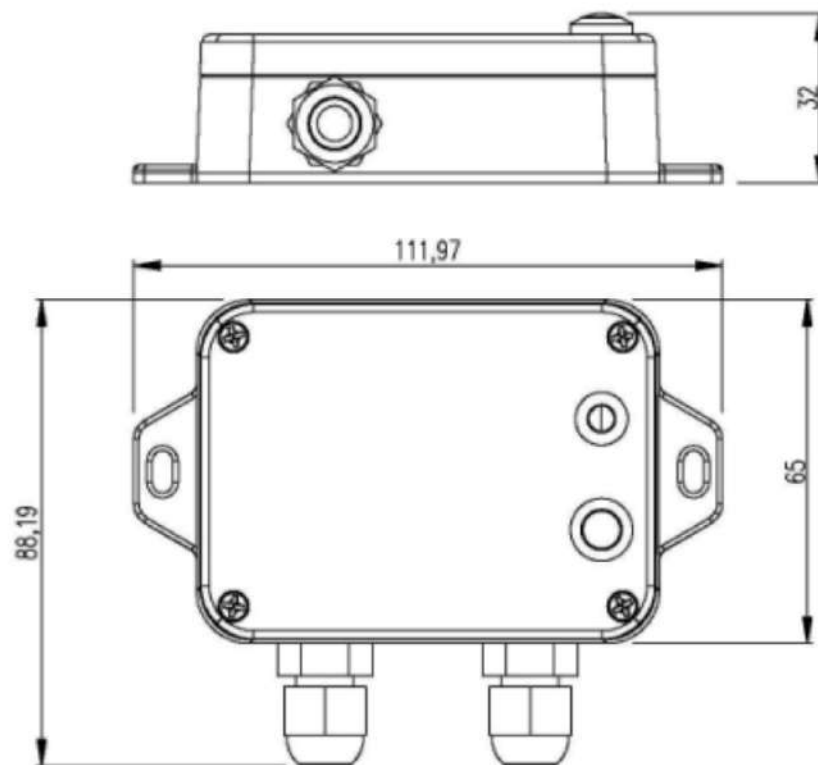
Main Characteristic

- Adopt SX1276 wireless communication module
- DC 12V adapter power supply
- Main body protection level IP65
- Temperature detection range 0~50°C
- The base is equipped with a magnet that can be attached to the iron object
- RS485 communication
- Detecting the turbidity value and the temperature of the solution
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum technology
- Configuring parameters and reading data via the third-party software platforms, and set alarms via SMS text and email (optional)
- Applicable to the third-party platforms: Actility/ ThingPark/ TTN/ MyDevices/ Cayenn

Applications Feild

- Turbidity detection
- Temperature detection

Dimensions



Electric

Power Supply	DC 12V adapter power supply
Operating Current	<70mA (external sensor)

*Specific electric characteristics will vary depending on the power supply voltage.

Turbidity Sensor Parameter

Model	ZS-206A
Measurement Principle	Scattering light method
Detection Range/ Resolution	0~1000 ntu / 0.1 ntu / 0.1°C (default) *0 ~ 100 ntu / 0.1ntu / 0.1°C (If the user need a range of 0~100 ntu, the user need to repurchase the sensor of this range.) *0 ~ 20 ntu / 0.01 ntu / 0.1°C (If the user need a range of 0~20 ntu, the user need to repurchase the sensor of this range.)
Accuracy	± 5% or ±3 ntu (0~1000 ntu) ± 3% or ±2 ntu (0~100 ntu) ± 3% or ±1.5 ntu (0~20 ntu) ± 0.5°C
Calibration	Two Point Calibration
Temperature Compensation	Automatic temperature compensation (Pt1000)
Output Method	RS-485(Modbus / RTU)
Operation Condition	0 ~ 50°C, <0.2MPa
Storage Temperature	-5°C ~ 65°C
Installation Method	Immersive installation, 3/4NPT pipe thread
Cable Length	5 meters, other lengths can be customized
Power Consumption	<0.3W@12V
Protection Class	IP68

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Receive Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	10km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3kbps~50kbps (LoRa) 1.2kbps~300kbps (FSK)
Modulation	LoRa / FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870,US902-928,AU915-928,KR920-923,AS923-1, AS923-2,AS923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration)

Physical Properties

Dimension	L 112mm* W 88.19mm* H 32mm
Ambient Temperature Range	-20°C ~ 55°C
Host Body Weight	About 160g
Ambient Humidity Range	<90%RH (No condensation)
Storage Temperature Range	-40°C ~ 85°C